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Fish Bone Causing Sealed Perforation Presenting as Lump Abdomen: A Case Report

ABSTRACT

Aim: A rare presentation of fish bone as a foreign body in a patient with pain and lump left side abdomen which intra-operatively was discovered to be a sealed off perforation.

Background: Fish bone most common form of foreign body in the upper GI tract is an emergency but in most of the cases the foreign body be it any variety or species of fish bone or for that matter any foreign body passes through the gastrointestinal tract in the most natural way ,but in one –tenth to one-fifth of the population a less invasive intervention is necessary but in 1 percent of the cases surgery is required when severe complications arise such as intestinal obstruction ,perforation, bleeding ,ulcer and peritonitis and can even cause death.

Case Description: Here we present a patient who presented to us with severe pain abdomen since 2 – 3 days with no history of fever and recently noticed lump left side of abdomen with redness and tenderness on palpation. As upper GI scopy and CT scan were quite inconclusive patient was taken for an emergency laparoscopic exploration which revealed a sealed off perforation with intraperitoneal abscess and a fish bone as a foreign body in inflamed omentum.

Conclusion: Even if the patient does not present with all the features of acute abdomen, and if the endoscopy and imaging are inconclusive there should be a very low threshold for surgical exploration laparoscopically to save the patient from dire complications and consequences.

Clinical significance: This case highlights that surgical intervention remains the mainstay and the earlier the better for an acute abdomen case wherein endoscopy and radiology are also inconclusive.

Key words: Foreign body, peritonitis, perforation, fish bone, laparoscopic exploration.

INTRODUCTION

Foreign body ingestion in adults is in general accidental and as per European guidelines (80 – 90 % of the ingested foreign bodies can spontaneously pass through GI tract, while 10 – 20 % of the ingested Foreign Bodies may need to be removed.[1]

Ingestion of sharp foreign bodies is mostly inadvertent and is a serious threat to one's life if not managed in a precedented way. When a foreign body whether sharp, smooth, round, oval or for that matter of any shape or configuration unknowingly or accidentally ingested by the patient whether in conscious or semi-conscious state can reach upper gastro-intestinal tract, it may perforate or abutt at some point, the wall of the stomach, small or large bowel, giving rise to atypical and dangerous symptoms which can also be fatal if not treated promptly.

The ingested foreign bodies can be organic like nuts, seeds,pieces of meat, fish or other poultry bones and inorganic like plastic, metal, batteries, toothpicks and cocktail sticks, glass pieces and many more. Patients most of the times forget swallowing them and even sometimes are dubious when they come to know about such a phenomenon which they became a victim of unknowingly.

Rarely the sharp foreign body may cause local perforation and yet leave the bowel naturally. This is called pin – prick and pass.[2]

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CASE REPORT

52-year-old female patient comes with complaints of severe pain in the left iliac fossa region in the past 5-6 days, increased in intensity since 1-2 days. No associated vomiting, fever or loose motions.

On clinical examination there was tenderness and induration present in the left iliac fossa region.

Patient was given a course of oral antibiotics for five days but still pain persisted along with gradually appearing redness over that area.

On doing a complete blood count there was a mildly elevated white cell count 11,100. Her haemoglobin was normal at 13.2. C-reactive protein was elevated to 66.

Ct abdomen and pelvis was done which showed A focal linear hyper density in the peritoneal fat in the left iliac fossa overlying the mid/distal jejunal loops with perifocal fat stranding.

These findings favour the possibility of foreign body in the peritoneal fat. No evidence of localized collection in this region. No evidence of pneumoperitoneum. No evidence of abnormal bowel wall thickening or mass is seen.NO ascites [Figure 1].

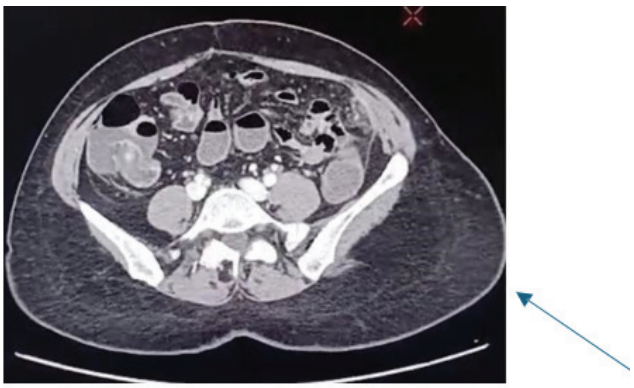

Figure 1: CT scan depicting focal linear hyper density in peritoneal fat in left iliac fossa overlying mid/distal jejunal loops with perifocal fat stranding.

Upper Gi scopy was done but was inconclusive.

Diagnostic Laparoscopy with removal of intra-abdominal foreign body with drainage of abscess with peritoneal lavage. Intra-operative findings were; omentum formed a localized abscess with fish bone. Part of omentum was separated and part of omentum with pus flakes excised. Fish bone extruded and delivered through 10 mm port. Wash given.one area of pin prick and pass puncture in the small bowel (jejunal segment). Sutured with 3-0 vicryl via mini laparotomy in the left iliac fossa region. Drain was placed and wounds closed in layers. [Figure 2] [Figure 3] [Figure 4] [Figure 5]

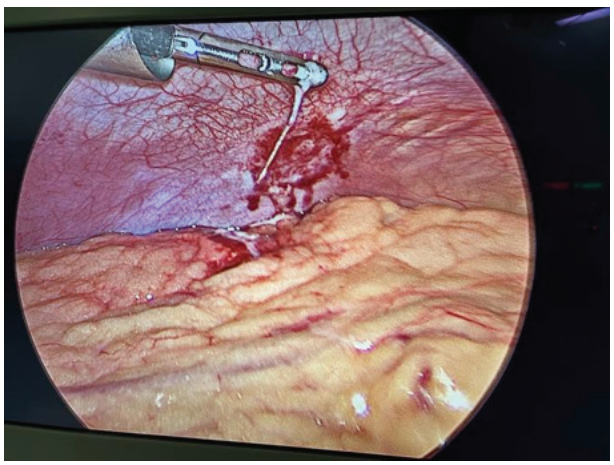

Figure 2: Fish bone extruded out from the peritoneal fat abutting the lateral abdominal wall(laparoscopic)

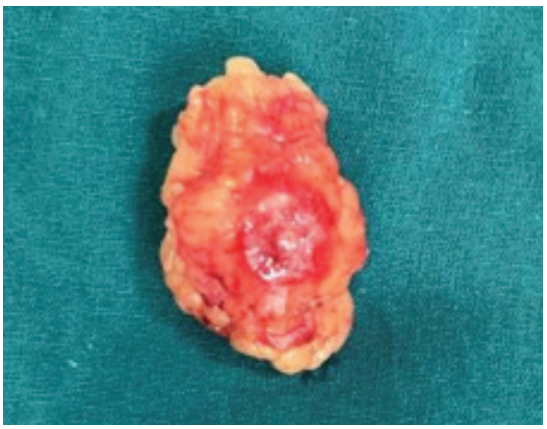

Figure 3: Part of omentum excised with abscess cavity.

Figure 4: Fish bone as a foreign body extracted.

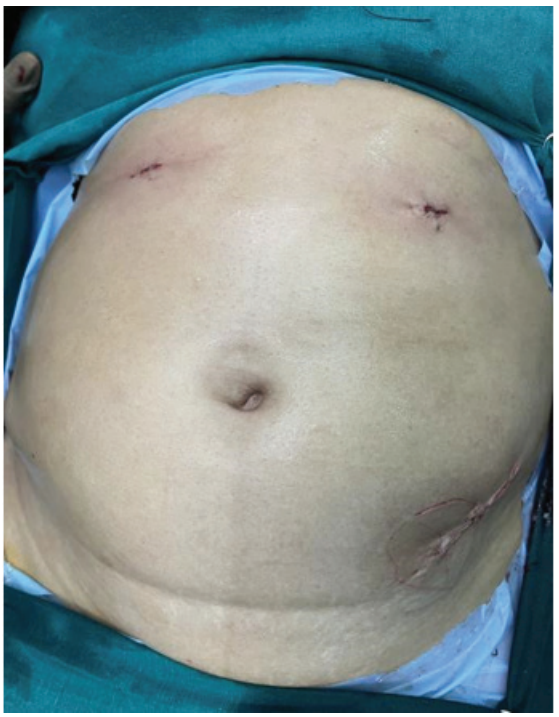

Figure 5: Post-operative picture post laparoscopic exploration.

Post-operatively patient was given intravenous antibiotics and intravenous fluids and gradually the patient was started on liquid and then soft diet. Drain was removed on postoperative day 3 and patient was discharged on postoperative day 4.

Patient underwent follow up every 3 months for a year and then 6 monthly for another year and is asymptomatic after 3 years post-surgery.

DISCUSSION

97-99 percent of the ingested fish bones which are a foreign body will surpass the gastro-intestinal tract without any untoward effects, but approximately 0.001 may pierce the small intestine mostly, very rarely stomach or the large intestine and present as an emergency abdomen with features of intra – peritoneal collection, intra-peritoneal inflammation, shock, sepsis, requiring urgent surgical intervention.[3] The most commonly affected segments are those with abrupt angulations and calibre transitions, such as pyloric region, ileum, ileo-caecal junction and recto sigmoid colonic junction.

On clinical examination most patients present with nonspecific or vague abdominal pain with wide array of drastic symptoms ie abdominal distention, bloating sensation, persistent vomiting,, inability to pass flatus or feces and on history taking often disregard the fact about fish consumption as they consider it a normal everyday eating meals and donot consider fish bone a threat.[6] Onset of symptoms maybe insidious and occur several days or weeks after episode of ingestion.[4]

It is difficult to differentiate poultry or fish bones from cocktail, wooden sticks or toothpicks on CT, but fishbones are generally curvilinear, while wooden sticks are less hyperdense and are more horizontal and straight.[2]

Fibrous Adhesions due to previous common surgeries like cesarean section. Hysterectomy, exploratory laparotomy cause localised kinking or tenting of the bowel loops preventing the sharp foreign body to “take the corner”[2]

Once a sharp foreign body be it organic or inorganic goes through and through of the wall of stomach or small bowel, omentum and mesentery will try to wall-off the impending perforation.

Most of the times, the abscess will develop in the peritoneal cavity in the form of collection, at times near the liver, in the abdominal wall or adjacent the psoas muscle. The sharp object (fish bone) may lie within the abscess cavity but also may remain at its outer side. If the fish bone or any other foreign body is not accessible for the endoscopists and is amenable for surgical removal, then inorder for faster and quicker post-operative recovery operative intervention surpasses all standards.[2]

The small and large bowel have been entrusted with the best natural defences to safeguard itself against any perforations by the ingested foreign bodies has a remarkable ability to protect itself against perforation in a way when confronted with a sharp object there is a local point of ischemia with a large centric concavity formed at that very site. The intestinal lumen increases at the point of contact which is done by the bowel wall, forcing smoother and easy passage of the culprit object.[7]

Foreign body perforation represents a challenging clinical scenario, and delayed diagnosis of complications and subsequent timely treatment result in increased morbidity and mortality.[8]

CONCLUSION

Fish bones as foreign bodies can cause pathology in any part of the oro laryngopharyngeal or gastrointestinal tract & can also involve adjacent organs.

The sequence of events starting from ingestion to the passage in stools can be different for every patient vary and can be difficult to differentiate from other conditions leading to similar symptoms, presentations and outcomes.

All patients with non-vegetarian food habits should be stressed upon in their history taking who present with features of intestinal obstruction and/or perforation, any intake fish with bones or poultry bones so that diagnosis is not missed for long until the patients present in an emergency.

However, endoscopy and radiologic imaging play very clear roles before sorting to surgical intervention. But in some cases when upper GI scopy and Computed Tomography scans are inconclusive or difficult to point out to the diagnosis surgical intervention especially Laparoscopic/Minimally Invasive access can not only point and confirm the diagnosis but even serve the purpose of therapeutic intervention by effectively treating it.

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